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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,822	12/27/2001	Jose Remacle	VANM160.001CP1	2468

20995 7590 05/08/2006

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EXAMINER	
SISSON, BRADLEY L	

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/035,822	REMACLE ET AL.	
	Examiner	Art Unit	
	Bradley L. Sisson	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45,48 and 50-88* is/are pending in the application.

4a) Of the above claim(s) *1-44 and 85* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *45,48,50-84 and 86-88* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/31/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 1-44 and 85 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 23 September 2003.

Specification

2. The specification contains numerous bibliographic citations, yet it has not been found to contain any statement that the cited documents have been incorporated by reference. As set forth in *Advanced Display Systems Inc. v. Kent State University* (Fed. Cir. 2000) 54 USPQ2d at 1679:

> Incorporation by reference provides a method for integrating material from various documents into a host document--a patent or printed publication in an anticipation determination--by citing such material in a manner that makes it clear that the material is effectively part of the host document as if it were explicitly contained therein. *See General Elec. Co. v. Brenner*, 407 F.2d 1258, 1261-62, 159 USQP 335, 337 (D.C. Cir. 1968); *In re Lund*, 376 F.2d 982, 989, 153 USPQ 625, 631 (CCPA 1967). **To incorporate material by reference, the host document must identify with detailed particularity what specific material it incorporates and clearly indicate where that material is found in the various documents.** *See In re Seversky*, 474 F.2d 671, 674, 177 USPQ 144, 146 (CCPA 1973) (providing that incorporation by reference requires a statement "clearly identifying the subject matter which is incorporated and where it is to be found"); *In re Saunders*, 444 F.2d 599, 602-02, 170 USPQ 213, 216-17 (CPA 1971) (reasoning that a rejection or anticipation is appropriate only if one reference "expressly incorporates a particular part" of another reference); *National Latex Prods. Co. v. Sun Rubber Co.*, 274 F.2d 224, 230, 123 USPQ 279, 283 (6th Cir. 1959) (requiring a specific reference to material in an earlier application in order to have that material considered a part of a later application); *cf. Lund*, 376 F.2d at 989, 13 USPQ at 631 (holding that **a one sentence reference to an abandoned application is not sufficient to incorporate from the abandoned application into a new application**). (Emphasis added.)

Attention is also directed to MPEP 608.01(p)I, which, in pertinent part, is reproduced below:

> Mere reference to another application, patent, or publication is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. 112, first paragraph. In re de Seversky, 474 F.2d 671, 177 USPQ 144 (CCPA 1973). In addition to other requirements for an application, the referencing application should include an identification of the referenced patent, application, or publication. Particular attention should be directed to specific portions of the referenced document where the subject matter being incorporated may be found. (Emphasis added)

3. Accordingly, the cited documents are not considered to have been incorporated by reference and as such, have not been considered with any effect towards their fulfilling, either in part or in whole, the enablement, written description, or best mode requirements of 35 USC 112, first paragraph.

Claim Rejections - 35 USC § 112

4. Claims 45-88 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Attention is directed to the decision in *University of Rochester v. G.D. Searle & Co.* 68 USPQ2D 1424 (Fed. Cir. 2004) at 1428:

> To satisfy the written-description requirement, the specification must describe every element of the claimed invention in sufficient detail so that one of ordinary skill in the art would recognize that the inventor possessed the claimed invention at the time of filing. Vas-Cath, 935 F.3d at 1563; see also Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572 [41 USPQ2d 1961] (Fed. Cir. 1997) (patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention"); In re Gosteli, 872 F.2d 1008, 1012 [10 USPQ2d 1614] (Fed. Cir. 1989) ("the description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed"). Thus, an applicant complies with the written-description requirement "by describing the invention, with all its claimed limitations, not that which makes it obvious," and by using

"such descriptive means as words, structures, figures, diagrams, formulas, etc., that set forth the claimed invention." Lockwood, 107 F.3d at 1572.

5. Claims 45-88 are drawn to the following inventions:

- Claims 45-69 are drawn to a disc comprising registered data
- Claims 70-72 and 87 are drawn to a method of making a disc;
- Claims 73, 86, and 88 are drawn to a kit;
- Claims 74-80 are drawn to a detection and/or reading device; and
- Claims 81-84 are drawn to a handling device for a disc.
- Claim 88 is drawn to an apparatus for performing eh method of non-elected claim 44.

6. With the exception of claim 85, *supra*, all claims under consideration depend from claim 45, the sole independent claim. For convenience, claim 45 is reproduced below.

45. **(Currently amended)** A compact-disc (CD) comprising:

~~registered data, and bound upon its surface,~~ one or more ~~non-cleavable~~ capture molecule(s) bound to a specific surface area of said disc, wherein said capture molecule(s) do(es) not comprise a cleavable spacer, ~~which allow~~ said capture molecule(s) providing a site for specific binding with one or more target molecule(s) to be detected, identified and/or quantified, wherein said capture and target molecules are selected from the group consisting of antibodies, proteins, receptors, ligands of said receptors, nucleic acids useful as diagnostic agents, nucleic acids useful for detecting presence of a pathogenic organism, and nucleic acid probes, wherein said nucleic acid probes are from nucleic acids encoding polypeptides, said polypeptides selected from the group consisting of enzymes, transcription factors, structural proteins, transporters, antibodies, antigens, receptors, markers of toxicity, bacterial markers, viral markers, oncogenes, tumor suppressors, senescence markers, tumor necrosis factors, proteins involved in apoptosis, inflammation, DNA damage and repair, oxidative stress, metabolism, and cell cycle; and

registered data concerning characteristics of the capture molecules or concerning treatment of a signal which results from binding between the target molecule(s) and the capture molecule(s), wherein said registered data is binary data.

7. As seen above, the CD must comprise one or more members selected from the group consisting of "antibodies, proteins, receptors, ligands of said receptors, nucleic acids useful as diagnostic agents, nucleic acids useful for detecting presence of a pathogenic organism, and nucleic acid probes, wherein said nucleic acid probes are from nucleic acids encoding polypeptides, said polypeptides selected from the croup consisting of enzymes, transcription factors, structural proteins, transporters, antibodies, antigens, receptors, markers of toxicity, bacterial markers, viral markers, oncogenes, tumor suppressors, senescence markers, tumor necrosis factors, proteins involved in apoptosis, inflammation, DNA damage and repair, oxidative stress, metabolism and cell cycle" The members of the grouping identified are

described in terms of how they are to function, without any associated structural identifiers. As presently worded, one of skill in the art would not be able to identify whether a given protein or nucleic acid is associated with any specific condition for which its identification would meet the utility requirements under 35 USC 101. Indeed, as presently worded, the method fairly encompasses the use of proteins, transporters, antigens, etc., that are as yet unknown. Such molecules are akin to expressed sequence tags, or ESTs.

A review of the disclosure finds the following examples:

Examples

Example 1: Detection of DNA on CD

Example 2: Detection of DNA on CD with laser detection

Example 3: Detection of protein on CD by light absorption

Example 4: Detection of protein Chips on CD with colorimeric labeling

Example 5: Detection of auto-immune antibodies on CD

Example 6: Magnetic detection of DNA or protein on CD

Example 7: Detection of several bacterial species and their genus by DNA microarrays present on the CDs

Bio-CD™ spotting

Example 8: Detection of gene expression on microarrays present on the CDs: exemple of HepatoChips

HepatoChips Design: Fifty-nine genes microarray

Example 9: Multiple sample analysis in the different molded chambers present on the same disc platform.

Example 10: Steps performed by the automate in the hybridization chamber.

Example 11: Olefinic oxidation

Example 12: Steps performed by the automate in the extraction, dilution, amplification and hybridization chamber.

Example 13: Target detection trough the reflective layer of a CD with one laser illumination beam and two detectors

Example 14: Description of a fluorescent reading device

Example 15: Detection of protein upon the disc according to the invention with colorimeric labeling

Example 16 : Detection of auto-immune antibodies upon the disc according to the invention

8. The examples provided, however, fail to provide an adequate written description of the full genus of discs claimed. Furthermore, it is noted that none of the "capture molecules" are impervious to any and all forms of cleavage.

9. While Example 8 teaches of using the "Rat HepatoChips ™ (AAT, Namur, Belgium)," and page 61 describes the nucleic acids as being "single stranded DNA probes attached to the glass by a covalent link," and Table 2 defines the target molecule in terms of certain genes and how they are believed to function, such does not provide an adequate written description of the immobilized nucleic acids, as such again speaks to functional attributes, and not physical or chemical properties that would allow a skilled artisan to recognize one sequence as being encompassed, or not encompassed, by the claims. Further, the record does not support the position that applicant possessed the nucleotide sequence for any and all target molecules, which fairly encompass any nucleic acid sequence that correlates with intelligence, aging, as well as correlating with any disease of any etiology, for any and all life forms.

10. As seen in claim 67, "the alignment of capture molecules is converted into digital information selected from the group consisting of words, numbers, music, software and data bases." A review of the disclosure fails to find an adequate written description of said "words, numbers, music, software and data bases."

11. Applicant's representative, through pages 2-4 of their response of 21 February 2006, directs attention to Tables 2 and 3 (pages 74-75 of he disclosure), which identify "Sequences presented upon the HepatoChips with their function and Genbank accession number" and "HouseKeeping genes included on he HepatoChip CD," respectively. It is noted with particularity that the sequences are essential to practicing the claimed invention, yet they are not represented by a SEQ ID NO. While applicant has provided Genbank accession numbers, applicant has not incorporated said databases disclosures, and as such, cannot now rely upon these non-incorporated disclosures for satisfaction of written description, enablement or best mode requirements of 35 USC 112, first paragraph.

12. Even if these Tables did fully describe he identified nucleic acids, a point the Office does not concede, the specification is essentially silent as to which "antibodies, proteins, receptors, ligands of said receptors, nucleic acids useful as diagnostic agents," what their structure/function description is, and how they are to be identified and used.

13. As noted above, the claims are also directed to making a CD which comprises said antibodies, proteins, receptors, ligands of said receptors, nucleic acids useful as diagnostic agents. With the specification not providing an adequate written description of the myriad

polynucleotides that encode virtually any polypeptide, and/or polypeptides selected from the croup consisting of enzymes, transcription factors, structural proteins, transporters, antibodies, antigens, receptors, markers of toxicity, bacterial markers, viral markers, oncogenes, tumor suppressors, senescence markers, tumor necrosis factors, proteins involved in apoptosis, inflammation, DNA damage and repair, oxidative stress, metabolism and cell cycle, the specification does not reasonably suggest that applicant had possession of the invention at the time of filing, for as noted above, the sequences used are not provided, and the accession numbers cannot now be relied upon for satisfaction of even these few species encompassed by the claims.

14. For purposes of examination, claims 74-80, directed to a detection and/or reading device, have been construed as encompassing a "disc" that can be of virtually any shape, that the registered data and capture assay may be on the same side, opposite sides, as well as allowing for the assay to be conducted internal to the "disc." Additionally, the CD that the device is to read may well have additional coatings over the surface of the disc, which may include coatings of the disc, prior to the attachment of capture moieties, as well as coatings/precipitates subsequent to a binding reaction having taken place. Given this breadth of interpretation, the specification has been found to be essentially silent as to how a CD reader is to be manipulated to read both sides of a disc, and to be able to interpret the clusters of signal, when normal CD readers are interpreting pits found in grooves- which is where the registered binary data is stored.

15. Similar issues of non-disclosure are found with respect to claims 85, drawn to an apparatus for performing he method of claim 44, and the handling device of claims 81-84.

16. Claims 73, 86, and 88, drawn to kits, are not adequately supported by the disclosure. It is noted with particularity that applicant is claiming compositions of matter. While the claims recite "reactants allowing the binding between a target molecule and its capture molecule," such speaks to how they are to perform, however, such language does not allow one to identify which compounds are encompassed by the claim and which are not.

17. At page 5 of the response received 21 February 2006, hereinafter the response, argument is presented that CD and DVD recording technology was known in the art and that there is no need for applicant to disclose same. This argument is persuasive to the extent that the CD or DVD has binary data written thereupon, and is subsequently being read, however, this argument is not persuasive to one using a CD/DVD reader to interpret clusters of signal that are coated on a support surface, and their placement has nothing to do with the groves and pits found therein.

18. At page 6 of the response argument is presented that the "components such as lasers, mirrors, and photodiodes for detecting light were known in the art." While agreement is reached in that these components were known in the art, the claims are not limited to said components. Such an argument is analogous to asserting that all genes are obvious given that they are comprised of deoxyribonucleotides (A, C, T, and G). However, it is well established that mere recitation of components of a device or atoms of a compound, do not make the device or compound obvious, nor adequate describe how they are arranged, nor rise to the level of reasonably suggesting that applicant was in possession of the invention at the time of filing.

It appears that applicant is attempting to satisfy the written description requirement of 35 USC 112, first paragraph, through obviousness. Obviousness, however, cannot be relied upon for satisfaction of the written description requirement. In support of this position, attention is directed to the decision in *University of California v. Eli Lilly and Co.* (Fed. Cir. 1997) 43 USPQ2d at 1405, citing *Lockwood v. American Airlines Inc.* (Fed. Cir. 1997) 41 USPQ2d at 1966:

> Recently, we held that a description, which renders obvious a claimed invention, is not sufficient to satisfy the written description requirement of that invention.

19. For the above reasons, and in the absence of convincing evidence to the contrary, the rejection is maintained.

20. Claims 45 and 48-88 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As set forth in *Enzo Biochem Inc., v. Calgene, Inc.* (CAFC, 1999) 52 USPQ2d at 1135, bridging to 1136:

> To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.' " *Genentech, Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1365, 42 USPQ2d 1001, 1004 (Fed. Cir. 1997) (quoting *In re Wright*, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)). Whether claims are sufficiently enabled by a disclosure in a specification is determined as of the date that the patent application was first filed, see *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986).... We have held that a patent specification complies with the statute even if a "reasonable" amount of routine experimentation is required in order to practice a claimed invention, but that such experimentation must not be "undue." See, *e.g.*, *Wands*, 858 F.2d at 736-37, 8 USPQ2d at 1404 ("Enablement is not precluded by the necessity for some experimentation . . . However, experimentation needed to practice the

> invention must not be undue experimentation. The key word is 'undue,' not 'experimentation.' ") (footnotes, citations, and internal quotation marks omitted). In *In re Wands*, we set forth a number of factors which a court may consider in determining whether a disclosure would require undue experimentation. These factors were set forth as follows: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *Id.* at 737, 8 USPQ2d at 1404. We have also noted that all of the factors need not be reviewed when determining whether a disclosure is enabling. See *Amgen, Inc. v. Chugai Pharm. Co., Ltd.*, 927 F.2d 1200, 1213, 18 USPQ2d 1016, 1027 (Fed. Cir. 1991) (noting that the *Wands* factors "are illustrative, not mandatory. What is relevant depends on the facts.").

21. As set forth above, the specification does not provide an adequate written description of the claimed invention, including the nucleic acids that are to be immobilized to the surface of a disc. Said nucleic acids are an essential starting material to both the making and use of the claimed invention. Further, without the disc, the reader and handler cannot function. It is well settled that one cannot enable that which they do not yet possess, and that one cannot enable an invention when the starting materials are not provided. The situation at hand is analogous to that in *Genentech v. Novo Nordisk A/S* 42 USPQ2d 1001. As set forth in the decision of the Court:

> " '[T]o be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.' *In re Wright* 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993); *see also Amgen Inc. v. Chugai Pharms. Co.*, 927 F. 2d 1200, 1212, 18 USPQ2d 1016, 1026 (Fed Cir. 1991); *In re Fisher*, 427 F. 2d 833, 166 USPQ 18, 24 (CCPA 1970) ('[T]he scope of the claims must bear a reasonable correlation to the scope of enablement provided by the specification to persons of ordinary skill in the art.').
>
> *****
>
> "Patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. *See Brenner v. Manson*, 383 U.S. 519, 536, 148 USPQ 689, 696 (1966) (starting, in context of the utility requirement, that 'a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.') Tossing

> out the mere germ of an idea does not constitute enabling disclosure. While every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention. "It is true . . . that a specification need not disclose what is well known in the art. *See, e.g., Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385, 231 USPQ 81, 94 (Fed. Cir. 1986). However, that general, oft-repeated statement is merely a rule of supplementation, not a substitute for a basic enabling disclosure. It means that the omission of minor details does not cause a specification to fail to meet the enablement requirement. However, when there is no disclosure of any specific starting material or any of the conditions under which a process can be carried out, undue experimentation is required; there is a failure to meet the enablement requirement that cannot be rectified by asserting that all the disclosure related to the process is within the skill of the art. It is the specification, not the knowledge of one skill in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement. This specification provides only a starting point, a direction for further research. (Emphasis added)

22. For the above reasons, and in the absence of convincing evidence to the contrary, claims 45-88 are rejected under 35 USC 112, first paragraph, as not being enabled by the disclosure.

23. At pages 6-9 of the response argument is presented that the specification enables the claims, and in support of this position, attention is directed to Example 1, pages 47-48, Example 2, and Example 8. It is noted with particularity that the examples identified are directed to the binding of DNA to a support and its detection. Claim 45, however, is not limited to binding of DNA to a CD. Rather, claim 45 fairly encompasses the binding of any molecule of interest. As set forth in claim 45, the capture and target molecules are to be selected from the group consisting of "antibodies, proteins, receptors, ligands of said receptors, nucleic acids useful as diagnostic agents, nucleic acids useful for detecting presence of a pathogenic organism, and nucleic acid probes, wherein said nucleic acid probes are from nucleic acids encoding polypeptides, said polypeptides selected from the croup consisting of enzymes, transcription

factors, structural proteins, transporters, antibodies, antigens, receptors, markers of toxicity, bacterial markers, viral markers, oncogenes, tumor suppressors, senescence markers, tumor necrosis factors, proteins involved in apoptosis, inflammation, DNA damage and repair, oxidative stress, metabolism and cell cycle" The specification does not teach how members of each of the identified genera are to be immobilized and detected. Further, applicant's representative's argument have not shown where the state of the prior art was such that one would know how to immobilize said molecules, manufacture and use a device, be it a handling, detecting, or reading device, where the support comprises said molecules, at the time of filing.

24. While applicant's representative has submitted exhibits to support the position of the disclosure satisfying the written description, enablement and best mode requirements of 35 USC 112, first paragraph, said exhibits have been found insufficient to overcome the instant rejections.

25. While the documents to teach of the state of the art as it relates to use of CDs in conventional means, the claimed method is not so directed. Acknowledgement is also made of the publication concerning "Eppendorf Array Technologies," however, it is noted that the document provided was printed in 2005. And the August 2002 publication by co-inventors also does not establish the level of the art at the time of filing. Accordingly, the exhibits have been found to be insufficient in overcoming the issues under 35 USC 112, first paragraph.

26. For the above reasons, and in the absence of convincing evidence to the contrary, the rejections are maintained.

Conclusion

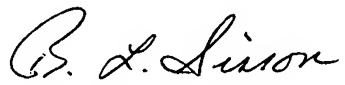
27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

28. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is (571) 272-0751. The examiner can normally be reached on 6:30 a.m. to 5 p.m., Monday through Thursday.

30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Bradley L. Sisson
Primary Examiner
Art Unit 1634

BLS
03 May 2006